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SOURCE Radio, No 11, 1949.THE PROBLEM OF RECEIVER ECONOMY

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The question of receiver economy was touched upon in Radio No 4, 1949, by E. Malakhovskiy, in connection with the third-class Rekord universal receiver. It should be mentioned that production of the Rekord set will be discontinued entirely by the end of 1949.

In its place the plants of the Ministry of Communications Equipment Industry developed and started production in 1949 on new models of low-cost broadcast receivers. These sets have 120/220 volt auto-transformers in their power-supply circuits, and this results in considerable saving in power consumption. For example, the Moskvich receiver consumes 35 watts, while the APZ-49 set takes 40 watts.

Changes have also been made in the models on the basis of the operating experience of the Rekord set. For example, the 30 Ts6S diode rectifier tube, which burned out frequently, has been replaced by a durable selenium rectifier operating in a half-wave circuit. However, we cannot at present agree with Malakhovskiy's recommendations for excluding the 30P1M tube from the circuit of the APZ-49 set since this tube has a number of good features -- in particular, a high transconductance (8-9 milliamps per volt) and low plate voltage with an output of 0.6-1.0 volt-amps.

The ability of a receiver to operate at comparatively low plate voltage assures great operating reliability. The operating conditions for the 30P1M tube in the APZ-49 set were lightened as a result of independent filament supply from a special winding on the auto-transformer. This arrangement eliminated the possibility of voltage kicks arising at the moment the set is turned on.

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The Rekord set was developed in 1949. It can be used on either AC or DC supply which assured its widespread use. As Malakhovskiy correctly stated, the Rekord set wastes a certain amount of power in voltage reduction when connected to a 220-volt line. On the other hand, for populated points having DC power, the Rekord set is irreplaceable.

The 220-volt network is not widespread as yet and therefore it must be concluded that the Rekord-47 set is being operated chiefly on 127 volts.

In localities having access to 220-volt AC networks, it is recommended that auto-transformers, available in sufficient quantities in specialized stores, be used.

Comment by editor of "Radio"

The use of auto-transformers for supplying the Rekord set from 220-volt networks cannot compensate for its shortcomings. Besides, such auto-transformers are relatively expensive and it is necessary, for proper operation, to provide an AC voltmeter or some other voltage indicator.

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